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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/393,525	09/10/1999	DAVID W. RUNTON	4044-A1	2845

7590 12/01/2003

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EXAMINER

LEE, PING

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 12/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/393,525

Applicant(s)

RUNTON ET AL.

Examiner

Ping Lee

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) 38-43 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-19 and 33-37 is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-14, 20-24 and 26-32 is/are rejected.
- 7) ☒ Claim(s) 6, 7 and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I in Paper No. 4 is acknowledged.
2. Claims 38-42 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 4.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
5. Claims 1, 2, 8-14, 20, 21, and 26-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Timis et al (US 5,792,971) in view of Doidic et al (US 5,789,689).

Regarding claims 1 and 20, Timis et al (hereafter Timis) discloses an apparatus for digitally enhancing a decompressed audio signal by adding harmonic content. The signal from analog audio source is being compressed and stored and decompressed during editing (col. 1, line 30+). However, Timis fails to clearly show the combination of a digital harmonic enhancer, a digital warmth adder and a digital frequency equalizer. Doidic teaches a digital apparatus having the combination of a digital harmonic enhancer, a digital warmth adder and a digital frequency equalizer for enhancing the sound from a guitar. Thus, it would have been obvious to one of ordinary skill in the art to modify Timis's system by utilizing the enhancing circuitry as taught in Doidic in order to allow the user to selectively enhancing the sound signal by adding harmonic content.

Regarding claims 2 and 21, although Timis fails to mention MP3 format, MP3 format was just a well known type of compression algorithm among several well known compression algorithms. It was considered as a matter of design choice to modify Timis's in view of Doidic to decompress audio signal stored in MP3 format.

Regarding claims 3, Doidic shows the digital amplifier (any one of Fig. 12-16)

Regarding claims 8, 9, 26 and 27, Doidic shows the response of the warmth adder (Fig. 12 or 14).

Regarding claims 10, 13, 28 and 30, Doidic shows the five-band equalizer.

Regarding claims 11, 12, 29 and 32, Doidic shows the DSP and the software.

Regarding claims 14 and 31, the claimed expert reads on the user.

6. Claims 4, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Timis in view of Doidic as applied to claims 1-3, 20-22 above, and further in view of Pritchard (US 5,133,014).

Regarding claims 4, 22 and 23, Timis and Doidic fail to teach that the harmonic enhancer including a high pass filter. Pritchard teaches such a circuit (Figs. 2 and 3) and further teaches that the analog circuit could be implemented in a DSP. Thus, it would have been obvious to one of ordinary skill in the art to further modify the system of Timis in view of Doidic by using a high pass filter as a part of the harmonic enhancer as taught by Pritchard in order to improve the tonal quality.

7. Claims 4, 5 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Timis in view Doidic as applied to claims 1-3 above, and further in view of Knoppel (US 4,150,253).

Regarding claims 4, 5 and 22-24, Timis and Doidic fail to teach that the harmonic enhancer including an adjustable high pass filter. Knoppel teaches such a circuit (Figs. 6 and 8). It was well known in the art that the analog circuit could be implemented in a DSP. Thus, it would have been obvious to one of ordinary skill in the art to further modify the system of Timis in view of Doidic by using an adjustable high pass filter as a part of the harmonic enhancer as taught by Knoppel in order to improve the tonal quality by cutting off the unnecessary bass signal.

Allowable Subject Matter

8. Claims 6, 7 and 25 and are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

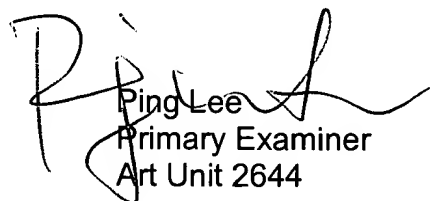
9. Claims 15-19 and 33-37 are allowable over the prior art in the record.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ping Lee whose telephone number is 703-305-4865.

The examiner can normally be reached on Monday and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W Isen can be reached on 703-305-4386. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.


Ping Lee
Primary Examiner
Art Unit 2644

pwl
November 25, 2003